

# Laura W. Bush Traveling Fellowship Reports

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(Part II)

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#### Kaitlynn Bartz, Summer 2012

## Roma in Serbia: A marginalized, ethnic minority in a sprouting democracy

Acknowledging success and identifying necessities for improving living conditions and reducing ethnic tensions between the marginalized ethnic Roma and ethnic Serbs in an emerging democracy.

The following is an executive summary of the discoveries made by a UNESCO Laura W. Bush Traveling Fellow who was awarded the opportunity to live in Serbia from June – August, 2012. While in Serbia the Fellow, **Kaitlynn Kelly M. Bartz**, recorded the stories of present-day ethnic discrimination against Roma, organized community-building initiatives for reducing discrimination, and purposefully established a youth leadership training program. A native of Portland, Oregon, Ms. Bartz is currently studying International Affairs and Public Policy at the George Washington University in Washington, DC

#### **Preface:**

Think of Serbia. What comes to mind? Do you think of a nation with a tumultuous path or a country ravaged by war? Perhaps you reflect on the conflict with Kosovo or the 1999 NATO bombings. Maybe your thoughts drift historically towards Josip Broz Tito's communism and the ethnically fueled disintegration of Yugoslavia. Or perhaps you think of Slobodan Milosevic's war crimes and his policies which furthered ethnic hatred in the region. In the minds of many Westerners, Serbia is synonymous with ethnic tension, violence, poverty, unemployment, and emigration. While these descriptors are true, they minimize Serbia's complex contemporary identity. Serbian culture, history, and people are by-products of the country's geopolitical position and thus strangely intertwined and yet separated from its neighbors. Politics, culture, and economics of the East and West collide in Serbia. In searching for its cultural identity, Serbia earns international attention and loses foreign interest at almost the same speed. With these preconceived notions -- some misconceived and others strikingly accurate -- I embarked on a seven-week trip to explore Serbia's internal tensions that are manifesting externally.

With the generous support of the U.S. National Commission for UNESCO Laura W. Bush

Traveling Fellowship, I traveled throughout Serbia from June 19, 2012 to August 7, 2012 conducting interviews with government and non-profit leaders, members of civil society, youth, and individuals without specific titles or categories. My trip started and concluded in the northern capital city of Belgrade. However, I spent most of my time in the southern towns of Nis and Leskovac. The level of poverty and the intensity of ethnic tensions exponentially increase as one travels further from the Belgrade. Recent findings by the European Commission and the United States Central Intelligence Agency verify that Serbia's population consists of five prominent ethnic minority groups with current nationwide unemployment at 23.4%. This high unemployment and ethnic diversity manifests instability disproportionately in southern Serbia.

Improving living standards for southern Serbs and Roma required first discovering what Serbians collectively desire and how the international community can provide support. Illumination came from many sources including Serbian families who opened their homes and their hearts and community leaders who shared personal insight on local conflicts and challenges. To my gracious Serbian hosts, my consistent hometown supporters (Oregon) and my academic guides at The George Washington University (Washington D.C.) who helped me process hours of interviews, volumes of notebooks, and an overwhelming number of ideas, I express my sincerest gratitude. While the gains from this experience are both scholarly and humanitarian, the greatest benefits are relational. This trip would not have been possible alone. Thank you for your continuous support and encouragement.

<a href="https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html">https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html</a>.

#### **Executive Summary:**

My trip initially focused on discrepancies in accessing public education between the Roma and ethnic Serbs. In my naiveté I expected to find long-standing discrimination in the education system similar to the "separate, but equal" discrimination in the United States' civil rights era. Within the first few days of my arrival, I realized this frame of reference was flawed for several reasons including:

- discrimination in Serbia is not limited by skin color,
- there is an extreme international pressure to eliminate discrimination in the region,
- contemporary challenges must be overcome in the context of a history of ethnic

<sup>&</sup>lt;sup>1</sup> Appendix A provides a brief overview of these interviews. Each interview is represented by an image of the subject and a few select quotes. Most interviews lasted approximately 90 minutes. Quotes for this executive summary have been paraphrased due to space restrictions. These interviews, in their entirety, will be used as foundational research for my undergraduate thesis.

<sup>&</sup>lt;sup>2</sup> Serbia: Growth and Fiscal Challenges. Issue brief no. 32. European Commission.. <a href="http://ec.europa.eu/economy\_finance/eu/forecasts/2012\_spring/cc\_serbia\_e">http://ec.europa.eu/economy\_finance/eu/forecasts/2012\_spring/cc\_serbia\_e</a> n.pdf>. "Serbia." *The World Factbook*. Central Intelligence Agency, 16 Oct. 2012

hatred, discrimination, and violence, and

• the term "discrimination" is widely defined, but narrowly interpreted.

My reference point missed the significant roles poverty, cultural identity, gender bias and economic conditions play in perpetuating discrimination and preventing sustained progress in inclusion.

Simply defined "discrimination" reflects one's pre-conceived judgment. Just as negative connotations produce negative interactions, intentionally constructed experiences can generate positive associations. Rather than focusing on their differences, Roma and Serb need to see what they share.<sup>3</sup> In identifying common ground they will look to help someone in need from a mutual perspective. Empathetic individuals are empowered by uplifting others rather than minimizing their existence. In this context, international advocates (individuals, state institutions, or international organizations) need to engage in both top down and grassroots activities. These efforts must be sustainable beyond human and capital resources from abroad. Thus, progress made must be self-sustaining. The Roma's plight in Serbia requires international pressure and support while practical programs must be implemented domestically.

At the onset I believed the discrimination -- rather overt or relatively hidden -- would be disguised in other forms and largely the result of historically repetitive social experiences. Overcoming these social tensions requires Serbians from all ethnic backgrounds participate in activities jointly. Serbians taught me that changing discrimination in their education system would necessitate all students *participate* in life together without barriers. While touring Serbia it rapidly became clear that increasing social inclusion among local youth would aid in the reduction of ethnically-charged discrimination. Jelena Despotívic, Children and Youth Coordinator for The United Nation's Joint Program for Peacebuilding and Inclusive Local Development (PBILD), expanded on this notion in her interview:

"They don't understand the cultural similarities they have. They have the same needs, but life for Roma is more difficult...putting them in the same situation makes them

<sup>&</sup>lt;sup>3</sup> According to UNDP, "'Roma' is not just a 'meta-group', an umbrella term encompassing different sub-groups. It is also a complex construct comprised of (and associated with) a myriad of diverse characteristics. Different sides involved (the groups in question, governments, international organizations) use the term as an intellectual shortcut ascribing to it different meaning." In Serbia some Roma are official citizens and some have lived in the country for generations. What separates these two ethnicities is both obvious and ambiguous. During my trip I discovered that skin color and socioeconomic status aid in the separation, but the division can be both self-inflicted and enforced by those in a stronger social position. Ivanov, Andrey. "Defining the Roma: Implications for Policy." *UNDP - Europe and Central Asia*. United Nations Development Programme, 19 Apr. 2012. Web.

<a href="http://europeandcis.undp.org/ourwork/governance/show/8FC9D104-F203-1EE9-BEF85E2860D69871">http://europeandcis.undp.org/ourwork/governance/show/8FC9D104-F203-1EE9-BEF85E2860D69871</a>.

#### feel they are equal...which is true."

Reducing ethnic tensions between ethnic Roma and ethnic Serbs through social inclusion and youth development became the primary objective of my trip. Therefore maintaining a flexible attitude and open agenda was essential as each day's labors varied greatly. Daily activities included doling out humanitarian aid to impoverished community members, teaching young Serbians English, or interviewing senior dignitaries such as the Project Coordinator for Governance and Social Inclusion with the (PBILD).

One of my personal initiatives involved bringing together Roma and Serb youth ages 13-20 for an evening activity. Work done by the Leskovac Evangelical Church (LEC) reflects such multi- faceted thinking. This faith-based group is recognized by government agencies for their work in the Roma community and actively supported my work while in Serbia. As a respected institution in civil society, LEC hosts medical clinics, international speakers, and aid workers along with services for the Serb majority, Roma minority, and the growing population of Chinese immigrants. The pastors intentionally lead by example as they coordinate multi-ethnic weekly leadership meetings. These meetings generate a better understanding of the needs within the various fellowships that now meet separately in order to accommodate the language barrier.

Recognizing the value relationships can have in closing divides, I expanded LEC's model. As a natural outgrowth of the work done by senior LEC leadership, I brought the Serb and Roma youth together for a youth meeting and skit night. It was a novel opportunity that could open communication between the two distinct groups. Rather than organizing something completely unfamiliar for them, and thus less sustainable, I called upon the Serb youth to engage with the Roma during the Roma youth's typical gathering time. The confidence and enthusiasm the Serb youth portrayed prior to entering the large community room faded as their Roma counterparts began singing, dancing, and clapping as customary in their traditional culture. Observing the Serbs' stiff stance and widened eyes, I identified their unfamiliarity with being the observing minority rather than the participating majority. Debriefing with two Serb girls after the meeting enhanced the value of simply facilitating interactions and building youth confidence and motivation to live beyond their comfort zone. Seventeen year-old Petra reflected, "I really enjoyed our meeting with the Roma [youth] because it is nice to know that we are not alone in the challenges we face at school." University graduate Tamara piped in, "I would like to do that again."

Upon arriving in Serbia I anticipated that structured day camps would expand such multiethnic youth interaction. Hopeful that the Roma and Serb youth working together could overcome ethnic barriers as they both discovered their similarities and valued their uniqueness while sharing accessible resources. In practice many Roma youth worked seasonal jobs supporting their families and were thus unable to meet regularly with me during my stay. While this was initially a major setback to my proposed project, the situation created a shift in application resulting in one of my most important sustainable discoveries: the privileged majority are most effective at empowering disadvantaged minorities. As I began to understand the value of the majority actively supporting the minority, I re-focused my project on developing relationships with the Serb majority and coaching their youth leaders to develop their skills in helping others gain access to the opportunities the Serbs already received.

Young Tamara met me with an open heart and an open mind. Her love for her family, friends, and community was evident in our first conversation: "I want to serve. Maybe what you have in mind is why I have finished my degree and cannot find a job." As I identified the need for a youth leader, it became apparent that Tamara had the necessary education and life experience for the job. By building her confidence and leadership skills, Tamara could continue meeting the needs of her community long after my return to the United States.

In the hours Tamara and I spent teaching each other – Tamara teaching me about her culture and me teaching Tamara about leadership development and social inclusion – we developed an agenda for Youth Leadership Week-end. Utilizing resources from LEC, we hosted a dozen Serbian youth who learned the significance of being outward oriented. We worked through personal trials and challenges collectively. Together we identified how their community would positively change by building relationships with those outside of one's immediate friend group.

After several weeks of interviewing government officials, church leaders, non-profit directors, and community volunteers, it became apparent that ethnic Roma girls had few opportunities to develop their talents and abilities. Forced to grow-up at a young age, these Roma girls not only lost the simplicity of childhood, but had few women older than themselves investing in their development. While working with Roma youth last summer, "Girls' Night" was created. "Girls' Night" provided a venue for developing female mentoring relationships with Roma and Serbian women in Leskovac. While painting finger nails and chatting through a translator, I shared stories about my favorite female heroes, my life back in the United States, and encouraged their self-esteem by acknowledging their personal value regardless of their circumstances. I implored them to not let anyone ever diminish their value as a student, a woman, and a leader. After making myself vulnerable, I opened the conversation for questions. Their questions mainly revolved around school, boys, American life and my post-college aspirations. Before we concluded the evening, I asked, "What would you like to do after you graduate high school?" These girls were some of the few ethnic Roma who were set to earn a high

school diploma and potentially an advanced degree. I expected to see their eyes light up as they would shout over each other in effort to divulge their exciting career plans and dreams for life after high school. Instead, the response I received was much more united and seemingly out of place: roaring laughter. With an uneasy grin I turned to my translator learning I had asked a cultural naive question. A timid girl waited for the laughter to die down and asserted, "After graduation, we must be married and have children. That is it. There are no other options." Returning home that evening with my Serbian host sister I contemplated the tragedy of their reality. Young girls with so much internal potential would not see the fruition of their gifts and abilities because of external forces. Their future was not just outside of their control, but as far as they could see, could never change. These students did not just need better access to education; they also needed to value themselves enough to fight for choices. Roma youth need internal motivation supplemented by selfconfidence and reinforced by individuals within their community. It is essential that Serbian youth of all ethnicities receive encouragement in their educational endeavors rather than reinforcing restrictive cultural norms which negated their individual giftedness and personal desires.

Unlike many Roma who are now accustomed to international aid on their behalf, many Serbs have a different experience. It was striking how resistant some Serbs were to my work because they felt all support was going to the racially marginalized rather than those who were ostracized because of their socioeconomic status. One evening my host family introduced me to Sarah, an unemployed mother of two whose husband was in a mental hospital. Upon learning about my focus on the Roma, she admonished me describing her frustration with international aid workers supporting the popularly disenfranchised rather than those who "called Serbia their home and were still struggling to survive." Her ethnicity might not connect her with the need for emergency aid, but her children were frail, often eating no more than a daily potato. Although Sarah's daughter occasionally interacted with Roma youth at LEC, she was weary of allowing her to build relationships with any members of the ethnicity who appeared to be taking away resources from her and her family. The international community's appropriation of resources domestically inadvertently fuels more adversity. Need, not greed, seemingly enhanced by foreigners perpetuates the problem.

#### My primary objectives were:

- improve access and usability of educational resources to the marginalized Roma, and
- increase unity between the two distinct cultures (Serbian and Roma).

Prior to departure, I detailed an action plan as to aid in accomplishing these abstract objectives during my brief trip. I was to identify differences in the quality and

<sup>&</sup>lt;sup>4</sup> Sarah is a pseudonym to protect the identity of the woman who provided me with this perspective.

accessibility of education ethnic Romas and ethnic Serbs receive, find examples where the education system perpetuates and resolves discrimination against the Romas, determine the variance in ethnic tensions and discrimination within the public classroom versus the local church, and evaluate how a service- based, education program can be implemented or supported by public school curriculum. The primary roadblocks for accomplishing all objectives were:

- lack of access to Roma children who were helping their families with seasonal work,
   and
- finding primary school teachers available for interviews during the vacation months.

While this initially made my objectives unrealistic, these setbacks provided me an opportunity to adjust my agenda to better impact the needs of the culture in which I was now immersed. Within the first week, it became clear that the Serbs needed training and empowerment as leaders of a social movement to cast aside judgments and preconceived dispositions regarding their fellow citizens of different ethnicity. As my time in the region lengthened, I discovered that this perspective enriched the programs I organized, meetings I held, service projects in which I participated, and interviews I conducted. Both formal and informal conversations became invaluable. The immediate impact was more discernible.

My original measurable goals were:

- create a three-year strategic plan for the Serbian leaders at LEC, and
- establish a youth-engagement program mobilizing youth (connected with LEC and comprised of both ethnic Romas and ethnic Serbs) who educate other youth on the necessity of reducing discrimination between the two communities.

There is tangible evidence of these results. However, I met these goals in a way that I could not have conceived prior to my trip. In order to leave the people I met in a better condition than when I had arrived, I needed to be flexible and revise the course of action. Summer life in Serbia is much less structured than my life in the United States. Learning to work with their cultural norm rather than restricting their flexibility became critical.

#### **Conclusion:**

Serbia's past atrocities and present trials are rarely addressed in the classroom in the United States. Granted little space in textbooks and dismissed as an insignificant nation in the global arena, often the experience of the ethnic Romas in Serbia mirrors the treatment of marginalized nations in the United States. This void provides an excellent opportunity to educate global partners on the challenges facing Serbia and the success of grassroots youth leadership training on transforming life within the larger community. Currently

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#### Appendix A

A brief overview of the interviews Kaitlynn Bartz conducted while in Serbia, June-August 2012. During the course of my adventure, I crossed paths with several incredible individuals who each had a story to share. By the time I returned to my university in Washington, DC their stories were woven into my own. Below you will find the perspectives they tried to share with me. Their stories are unique because they are innately individual; however, their messages are symbolic of others in the region and can aid in bridging the cultural gap.

"It is better to work in spiritual way than to be a teacher...Before Christ, my dream was to be the President of Roma in Serbia...but the best way is to work for the LORD and then to help the Roma people is the better way. All political men they know me and when I went to Christ many of them said I was crazy – out of mind. And now after many years they see my work and come to the church and say you chose the better way than we because of the very bad discrimination for the Roma people in Serbia. When someone is changed spiritually, they change their whole life."

~ Pastor Sherif, Roma congregation, Leskovac Evangelical Church

"Theater plays allow us to have an open discussion. Some know there is discrimination, but they don't understand the feeling. They see that it is painful and not fair. This is often the first time for them to work together in the same space. There is no place or opportunity where young people can work together, meet together.

"They don't understand the cultural similarities they have. They have the same needs, but life for Roma is more difficult...putting them in the same situation makes them feel they are equal, which is true."

"It's hardest for young Roma girls to find possibilities in their own families."

"The value of investing in one person is the best opportunity for development." "The greatest barrier to change is motivation...nobody participates, nobody has the opportunity to see they have the same problems."

~ Jelena Despotívic, Children and Youth Coordinator for PBILD

"(Humanitarian aid) is help, really help...but it is (only) one kind of help, emergency. It is a different kind of help to start something where we can earn our own income" ~ Daniel, Serb from Leskovac

"We use the same approach when reaching out to Roma and Serb youth."

"We see a lot of voluntary segregation...we offered a hand [to a young Roma boy], but he would not take it."
"First we need to find leaders of the Roma population. Then we include that leader and he includes the rest. The trouble is finding the leaders."

~ Predrag Jovic Director of Youth and Sports for the City of Leskovac

We need to make warm environment for non-believers: with welcome, with hug, with love, with compassion. [Serving others] is not an excuse to be tired; if we are tired something is wrong with us. Jesus said 'Come to me and I will bring you rest.' So if you are with Jesus it is not possible for you to be tired. Physically and spiritually, you cannot be tired from people." ~ Sladja,

Volunteer for Leskovac Evangelical Church and Director of the LEC's humanitarian relief

"I see big discrimination. It is very serious."

"Roma are part of our country...[there are differences between Roma and Serb] but difference doesn't mean better or worse, different is just different."

"I'm still. I'm not tired. Sometimes I have low energy, but it is not as important because I have women...who trust each other. Don't look at color of skin, faith [religion], sexual orientation, it's not important. We are persons. We are women. Don't be a hypocrite, but be honest. Be yourself." ~ Executive Director of Women for Peace: Leskovac

Gypsy kids are very clever and smart..." - *Zoran* (L) "...but it all depends on the economic power of the city." - *Rama* (R)

"There might be 10 smart kids (in a Roma family), but it depends on the economic power of the family how far they will go in school." "Our church is effective because the role of the church is to make them better people and teach them how to live an abundant life as Jesus did." (His shirt reads: "Variety is the spice of life")

~ Zoran, Director of Leskovac Roma Culture Center and Deacon in Leskovac Evangelical Church

"The Roma church is helping us in our work."

"Gypsy people in Serbia cannot receive that which is normal to other Serbs."

"People recognize the role of the church – not just believers, but the greater Roma people and police. When [Leskovac Evangelical Church] started among the Roma people there was less fighting among them, less stealing among them...they help with peace among Serb and Roma. Police recognize the church as a center for social work." ~ Rama, Leskovac City Council Member and Regional Representative for the National Council of Roma Minority in Serbia

"I want it to be better for my daughter." ~ Ana, Volunteer for Leskovac Evangelical Church and Women for Peace: Leskovac

"I could always tell that I had a very good childhood. I had good parents who gave me every opportunity and I was able to choose my company and friends."

"When we think about youth, the world gives lots of opportunities to young people, but the church does not. I want to give more opportunities and better opportunities so they stay in church."

"When you give young people responsibility, they will receive and do things."

"In the past, few youth finish school. Now our numbers are very good. We are talking to them through the message, teaching, and personal interactions and telling them to go to school...we teach not just through the Bible, but through real life, using 'living examples'"

"The biggest challenge now is taking marriage so young."

"There exists discrimination, not just in school, not just from friends and from school, but from teachers too. But there are some positive things. Lots of youth from the church have good friends who are Serbs. In fact, some of their closest friends are Serbs because they grew-up going to school together. They say they love to be with them because they respect them. Sometimes discrimination happens because someone wants discrimination. Our (Roma) people sometimes make our own trouble. ~ Pastor Bojan, Roma congregation, Leskovac Evangelical Church

"I want to help my people to have a better life, better standard, starting with this organization that was already doing work for my people." "We give books, like presents, so they can go to school." "We analyze everything, analyze our problems. We need to know the situation in order to know the solution in our community." "We need lots of projects where we work with the majority so we can get over the stereotypes. If we can develop tolerance than we can get over these stereotypes and then overcome the discrimination." "From the beginning, my desire was to help my people."

~ Sasa Sxanojevic and Srba Sxojijkovic, Directors of a non-profit which surveys the Roma population in Vlasotince

"People's lives are hard, both Roma and non-Roma...poverty is not just a [problem] for Roma." "Unfortunately, [politics create] a problem for sustainability."

~ Marina Babović, Project Coordinator for Governance and Social Inclusion for PBILD and a native of Serbia

"It is a big problem when people don't have time to talk with them (the Roma) about their problems."

"The more problems you have, the more you learn to enjoy life."

~ Dusan Pesic, Commissioner for the Information of Public Importance for the City of Leskovac

"It is Serbia, everything is connected." ~ Director of Social Services for the City of Leskovac.

#### Roma in Serbia: A marginalized, ethnic minority in a sprouting democracy

### Appendix B

A visual representation of the projects Kaitlynn Bartz completed while in Serbia as well as her participation in diplomatic events.

Kaitlynn with Roma after speaking at their church service





Kaitlynn supporting Serbian youth leaders at LEC





Kaitlynn with Roma and Serb youth at an English camp



#### Saira Husain, Fall 2012

#### Malnutrition and Gastroenteritis in Pakistani Children: A Feasibility Study

**Project Summary:** 

Gastroenteritis, the inflammation of the gastrointestinal tract, is a well-known illness that plagues over 111 million children under the age of 5 around the world each year. It results in acute diarrhea and often leads to severe dehydration and death. In underdeveloped countries, gastroenteritis is the leading cause of death among infants and children under the age of 5.2

In the anthropological and biological research conducted by Mumtaz et al. (2010), socioeconomic deprivation, manifested by household crowding, low maternal education,<sup>3</sup> failure to breast feed exclusively for the first 4 to 6 months of life, using infant bottles which are difficult to clean,<sup>4</sup> storing food at room temperature, failure to wash hands and dispose of feces hygienically and drinking contaminated water factor into the spread of diarrheal disease. Those infected are mostly uneducated and live in poor hygienic conditions. The children are not properly looked after and hand washing is not practiced. Children that crawl are more exposed to dirty surfaces and are therefore more vulnerable to these fecal-oral infections. Fecal to oral transmission is facilitated by insanitary conditions. The prevention of transmission involves the improvement of sanitary conditions, health education, and better nutrition (Bajolet & Chippaux-Hyppolite, 1998).

December 2012- January 2013, I spent four weeks in Peshawar, Pakistan Grant to understand the contextual and causal factors surrounding the current epidemic of gastroenteritis among children in Peshawar Province, Pakistan through questionnaires in both hospital home settings. I returned to Karachi, Pakistan this past winter to focus on the issue of malnutrition, more specifically feeding practices, and how it relates to diarrheal diseases in a bilateral cohort.

Through my research in Peshawar, I concluded that various misconceptions about teething, diaper usage, and methods of rehydration potentially lead to the propagation, recurrence and prevalence of acute gastroenteritis. Patients, nurses and even some doctors have cited teething as a cause of acute gastroenteritis. Research elucidated the facts that teething causes children pain, leading to an increase in the number of various objects the child puts in his or her mouth. While the mastication of these unhygienic objects often leads to acute gastroenteritis, the emergence of a child's teeth does not.

Along with this, due to socioeconomic circumstances, most acute gastroenteritis patients use cloth or no diapers as opposed to store-bought, plastic diapers. The lack of proper diapers allows for the

<sup>&</sup>lt;sup>1</sup> Bloomfield, Sally F. "The Global Burden of Hygiene Related Diseases in Relation to the Home and Community." International Scientific Forum on Home Hygiene (2009): 24.

<sup>&</sup>lt;sup>2</sup> CK King, "Managing acute gastroenteritis among children: oral rehydration, maintenance, and nutritional therapy," 2003, <a href="http://www.ncbi.nlm.nih.gov/pubmed/14627948">http://www.ncbi.nlm.nih.gov/pubmed/14627948</a> (accessed November 20, 2011).

<sup>&</sup>lt;sup>3</sup> Fagundes-Neto, Ulysses. "Acute Diarrhea and Malnutrition: Lethality Risk in Hospitalized Infants." Journal of the American College of Nutrition 18.4 (1999): 303-308.

<sup>&</sup>lt;sup>4</sup> Mary Anne S. Baysac, "Prevention and Control of Diarrheal Diseases," 1999,

<sup>&</sup>lt;a href="http://dcc2.bumc.bu.edu/ih887/presentatons99/Diarrh/prevention">http://dcc2.bumc.bu.edu/ih887/presentatons99/Diarrh/prevention</a> and control of diarrh.htm> (accessed November 23, 2010)

leakage of a child's fecal material onto the secondary surface below such as the bed sheets, floor, or hands. Due to the lack of containment and proper washing practices, acute gastroenteritis is able to spread quickly and re-infect the child. Lastly, many patients cited rehydrating their sick children with chai and kava. Chai and kava are common hot beverages in Peshawar, Pakistan. While the boiling of the water ensures the safety of the drinking water, the large amounts of sugar in these drinks can make diarrhea worse and lacks important minerals necessary for the dehydrated child.<sup>5</sup> Identifying the causal effects of acute diarrhea will help to determine how and where intervention is necessary.

These conclusions along with Bajolet and Chippaux-Hyppolite's assertions led to Phase II of my project which included focusing on the issue of nutrition and parental feeding styles of children under the age of five in Karachi, Pakistan.

I worked with Indus Hospital, a large, private free hospital that catered to the socioeconomically disadvantaged class in Karachi. There we administered surveys to parents of children between the ages of 6 months and 2 years. Children under the age of 2 are most vulnerable to infectious diseases and since we were looking at parental feeding styles we created our cut off at 6 months-the age when infants should begin eating solid foods. One hundred patients were screened and asked to participate in our study which consisted of three main thrusts: assessing the caregiver's feeding style, obtaining patient history and anthropometric data, and determining the patient and mother's iron levels.

The caregiver was asked a series of questions regarding their feeding style using the Caregiver's Feeding Style Questionnaire. This tool was developed and validated by Hughes to examine the role of parent-feeding style to child nutrition in minority groups in the United States (Hughes et al., 2005). Since parents may have different goals for their children's growth and development, their feeding practices may vary according to their perceptions of how well their children are doing and their ability, both financially and physically, to feed them. Child feeding practices include the level of control the parent exerts of over the type and amount of food the child eats, role modeling of eating behaviors, feeding cues or prompts given to the child, and the actual mealtime environment and routines (Chaidez, 2011).

Through these interviews, we classified parents into one of four feeding styles: authoritative, authoritarian, indulgent, and uninvolved. Further data analysis on the association between parental feeding styles, mother and child BMI and socioeconomic status are being conducted.

In conclusion, we strongly believe that parental perceptions and their feeding styles impact infant nutritional health. This early nutritional health is vital in establishing a healthy gut flora that is capable of preventing the onset of diarrheal disease and better dealing with gastrointestinal diseases.

Future work will include working in conjunction with community health workers in Pakistan on a 2-step protocol: 1. Educate parents on appropriate feeding practices 2. Educate parents on the importance

<sup>&</sup>lt;sup>5</sup> Mayo Clinic Staff. "Gastroenteritis: First Aid." <a href="http://www.mayoclinic.com/health/first-aid-gastroenteritis/FA00030">http://www.mayoclinic.com/health/first-aid-gastroenteritis/FA00030</a> (accessed January 28, 2012).

of hand washing with soap. This simple, sustainable intervention will help establish practices that will aid in preventing diarrheal diseases in susceptible children.



Peshawar, Pakistan- Team I worked with









Malnutrition Clinic in Karachi, Pakistan: Before and After intravenous Oral Rehydration Solutions (ORS)

Peshawar, Karachi,



Peshawar, Pakistan- Patients

Pakistan- Outpatient Clinic Pakistan- Me in the Malnutrition Clinic

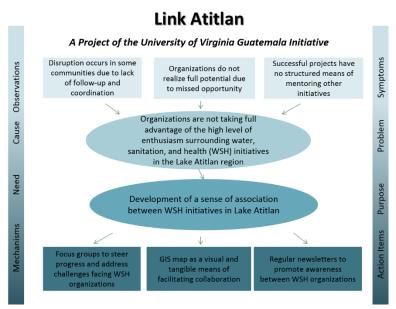
#### Carolyn Pelnik, Fall 2012

## A Geo Health Alliance: Collaboration to Increase Potable Water Access in Lake Atitlan, Guatemala

#### **Proposed Objectives**

In an initial trip to Lake Atitlán, Guatemala, I worked with a team through the University of Virginia Guatemala Initiative (UVAGI) to conduct a survey of water infrastructure in the lake region. Our team found that many non-governmental organizations (NGOs) working in the sphere of water and sanitation suffered from a lack of communication with one another,

resulting in overlapping projects, inadequate follow-up, and strained resources. The proposed objective of the current project, as funded by the Laura W. Bush Traveling Fellowship, was to complete a geographic information system (GIS) map of water and sanitation initiatives in the lake region. While developing the map, our team worked alongside NGOs to solicit feedback and to create a geo-based health alliance of organizations that work on water and sanitation projects. By encouraging collaboration and effective communication, the long-term vision of this project is increased access to potable water in the Lake Atitlán region.



This current project, termed the LinkAtitlán project, addresses the symptoms depicted in the above info-graphic through a three-fold approach that combines a GIS map with in-person networking.

#### **Rationale and Project Summary**

In Guatemala, 40% of the rural poor lack a household water connection, <sup>6</sup> which limits access to potable water. Consumption of contaminated water causes gastrointestinal disease that can inhibit childhood cognitive development and pose barriers sustainable development. <sup>7</sup> Through the University of Virginia Guatemala Initiative (UVAGI), our preliminary survey of water infrastructure indicated a lack of communication between organizations working in the water and health sectors, resulting in project duplication, inadequate follow-up, and strained resources. To promote increased communication, we designed LinkAtitlán, an online network to consolidate project information and provide an interactive collaboration tool for organizations. In the initial pilot of LinkAtitlán,

<sup>&</sup>lt;sup>6</sup> Inter-American Development Bank, Office of Evaluation and Oversight. (2007). *Country program evaluation: Guatemala*. Retrieved from website: http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=2054183 

<sup>7</sup> Petri, W.A., Miller, M., Binder, H.J., Levine, M.M., Dillingham, R., & Guerrant, R.L. (2008). Enteric infections, diarrhea, and their impact on function and development. *Journal of Clinical Investigation*, *118*(4), 1277 – 1290.

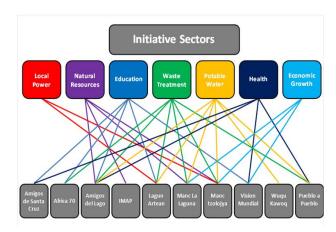
funded by the Laura W. Bush Traveling Fellowship, I, alongside other members of the UVAGI, met with community mayors and nine organizations who viewed improving project visibility and collaboration as critical for progress in the Atitlán basin. With feedback from organizations, we will create another iteration of the LinkAtitlán tool to better facilitate information sharing and collaboration among public and private water and health initiatives in the Lake Atitlán basin.

#### Methods

#### Phase I: Review of Initial Survey Findings

The findings of our initial water infrastructure survey were fundamental to the mission of LinkAtitlán. In our review of the previous survey's findings, we found:

- Non-governmental organizations (NGOs) tend to work across sectors: in one survey, 10 organizations worked across 7 sectors (e.g. the water, health, or education sectors). The graphic to the right depicts the variety of sectors in which the surveyed initiatives conducted their work.
- NGOs that install water filters use more than five different types of filters throughout the lake basin.
- All surveyed organizations spoke of the need for increased communication among lake-based initiatives.



The cross-sector work, variety of filters used, and expressed need for increased communication were the basis on which we began to brainstorm means of developing a basin-wide networking tool. Working across multiple sectors and the variety of water filters installed are not in themselves problematic; however, they create additional obstacles to effective communication that we felt could be mitigated through a networking tool.

#### Phase II: Prototype of LinkAtitlán

Noting the need for increased communication between organizations, we developed criteria for an effective networking tool. The design should 1) create a highly visible network of organizations, 2) be accessible and enjoyable to use (thereby promoting its own sustainability through organization buy-in), 3) promote active networking, as opposed to simply consolidating information passively.





Based on these three criteria, we proceeded with the design of LinkAtitlán, an online network that would categorize and depict project information through a geographic information system (GIS). Images of the initial prototype of LinkAtitlán are displayed above. The GIS map is embedded in a website that depicts information about water and health initiatives both geographically and in individual organization profiles (an example profile is depicted below). The website is to be accompanied by discussion forums and periodic newsletters. Partner university students located in Guatemala will continue to coordinate the addition of new organizations to LinkAtitlán.



#### Phase III: Pilot of Initial Prototype

In the initial pilot of LinkAtitlán, I, alongside other UVAGI team members, met with nine partner organizations in the Lake Atitlán basin to solicit feedback on the tool. The majority of the surveyed organizations were currently featured on the website and map, and the others expressed interest in joining the LinkAtitlán initiative.

#### **Outcomes**

The interviewed organizations to whom we shared the prototype provided feedback in three primary areas:

• The tool should be used to promote not only online but also off-line communication in the form of conferences and focus committees.

- The tool should promote local, national, and international visibility of projects.
- LinkAtitlán should be maintained regularly by adding new organizations, releasing newsletters, and moderating discussion forums if the tool is to be highly interactive.

All surveyed organizations expressed the role that they felt the LinkAtitlán tool could play in increasing project effectiveness. The prototype feedback will continue to be incorporated into future iterations of the tool's design.

#### **Future Development**

The LinkAtitlán prototype will continued to be refined, particularly to incorporate the received feedback. We also project that future development will expand the tool's reach to a greater number of lake-based organizations, including both municipally-run projects and NGO-administered initiatives. Further, we plan to increase the interactivity of the website and to pursue collaborations with other communication-oriented initiatives that seek to increase collaboration among organizations in the Atitlán region.

#### **Photo Appendix**

Lake Atitlan, Guatemala—as viewed from Panajachel; this photo was taken in front of an under construction water treatment plant:

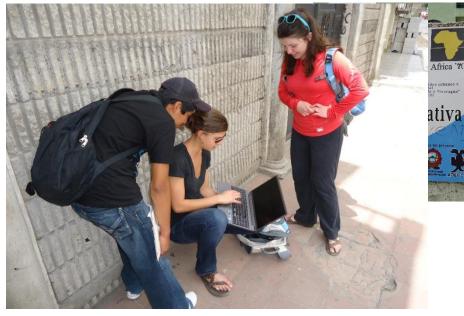


A sample of the organizations visited during the prototype pilot:

The University of Virginia Guatemala Initiative (UVAGI) team in action







#### Lacey Williams, Fall 2012 Women's Agribusiness Training Program in Ngongongare, Tanzania



**Project Goals:** The project sought to promote women's empowerment and food security by providing a women's microfinance group in Ngongongare, Tanzania with a women's business training program, interactive community education garden, and sustainable agriculture techniques curriculum. The training provided through this program aims to increase crop yields and improve business models for Ngongongare's high population of subsistence farmers.

**Project Execution:** With peer researchers, my team implemented this project through a three-fold approach that integrated agriculture and business training with monitoring and evaluation throughout. Our project partnered with Jifundishe Free Library, which administers a local women's microfinance group in Ngongongare, Tanzania. Upon arrival, we conducted focus groups as well as a preliminary survey to assess the program participants' vision and expectations for the program as well as to collect baseline data that we could use as a point of comparison in our project follow-up. We found this preassessment highly instrumental in developing an early rapport with the women with whom we would be working.

We worked with a local agriculture specialist, based out of the Arusha Vegetable Research and Development Center (a local office of the World Vegetable Center), to design and implement the agricultural training program. By working with a local agriculture expert, we were able to ensure that the agricultural methods taught through the training were geographically and culturally relevant. The agriculture program prioritized low-cost, sustainable methods of increasing yield over the long-term and included such topics as crop rotation, pest management, composting, and drip irrigation. The agriculture training was implemented through use of a community education garden, also designed and built as a component of our Davis project. Access to the garden enabled the curriculum to be highly participatory and enhanced learning objectives by enabling the program participants to experience agricultural techniques in practice.

The agriculture training was implemented concurrently with a business education program. Our project adopted this joint agriculture-business approach to appeal to the significant portion of our program participants who received loans for agriculture-based businesses. Of the women who used microloan financing for non-agriculture businesses, many still practice subsistence farming. The intent of the program, thus, was to provide business training that could enhance the profitability of the microloan

recipients' businesses generally as well as to provide agriculture instruction that increased the productivity of both subsistence and commercial farmers.

We developed the business component of the curriculum with assistance from the international NGO, Global Grassroots, which provides business training to women on a grassroots level worldwide. The business curriculum sought to provide the women with basic profit maximization, accounting, and business planning knowledge that would increase the profitability of their businesses.

Through the strong support network provided by the staff at Jifundishe, project implementation took place smoothly. In fact, our largest anticipated obstacle was attrition throughout the course; contrary to our expectations, we actually acquired additional program participants throughout the duration of the program. We also found that working closely with a translator enabled us to overcome language and cultural barriers that could have inhibited curriculum instruction. Our translator served not only as a language assistant, but also as a cultural ambassador.

We did, however, encounter certain obstacles in the logistical execution of the project. The execution of rigorous program evaluation in a community that was unfamiliar with social science research presented difficulties. We found that some of the challenges could be mitigated by working closely with local staff who were able to assist us in developing our pre- and post-surveys in a culturally sensitive manner.

Our training reached approximately 60 women, whose family members total more than 200. In providing agricultural and business training, our project aimed to improve crop yields and business effectiveness, thereby resulting in greater agency and income for women. Our long-term vision is that women will invest additional income in their families, and in doing so will reduce rates of childhood malnutrition and increase access to education. The sustainability and continuation of our project is assisted by its institutional home in an established NGO that has the financial and human resources to offer continued education programming. Throughout the project's implementation, we documented all curriculum materials and worked closely with NGO staff to ensure that the curriculum could be replicated in the future should another cohort of microloan recipients desire a similar training program.

**Project Reflection:** Through skills workshops and group discussions, the women in our program gained confidence in themselves and motivation to improve their businesses. In the short-term, the women are able to bring added energy and creativity to their families and businesses. In the long-term, our project aims to increase peace through greater food security and gender empowerment. Through the program's joint emphasis on agriculture and business, the project aimed to both improve cultivation techniques and business profitability that will ultimately result in greater agency and resources for the women and their families. This in turn fosters community peace through greater access to opportunity and ability to resist violence.

By working closely with local women, we gained a new perspective on effective community development. The women's vibrant personalities and strong desire to improve life for their families illustrated the importance of solutions coming from within the community. The project also highlighted that sustainable change occurs over long period of time, often several generations. Some campaigns for community development seek to rapidly reduce poverty. Though such campaigns are noble, this project underscored the obstacles that short-term initiatives face in making a lasting impact. From this project, we gained a deep appreciation for the long-term capacity building that occurs through sustainable improvements to education and health.

**Acknowledgements:** This project was collaborative effort by University of Virginia students and faculty, the Jifundishe Free Library staff and community, the Global Grassroots non-profit, and additional funding provided by the University of Virginia Jefferson Public Citizen Program and Davis Projects for Peace. Many thanks to our Jifundishe mentors Sudi Abdallah and Elly Mbises; my fellow student

researchers Carolyn Pelnik, Porter Nenon, Ellen Chapin, and Emily Marshall; our UVA faculty mentor Christine Mahoney; and Global Grassroots founder Gretchen Wallace.

#### APPENDIX: Photographs









Marissa Reitsma Summer, 2013

#### The Intersection of Culture and Health: A Mixed-Method Investigation into the Effect of Ethnic Affiliation on Clinical Outcomes in HIV-Infected Kenyans

#### **Project Summary:**

I had the opportunity to travel to Kenya and conduct formative qualitative research on the interaction of culture and health. Through semi-structured interviews, I investigated whether there were associations between ethnic affiliation and HIV treatment failure. Several themes arose when analyzing interviews, including the influence of stigma, alcohol use, and alternative medicine. Next, I conducted a chart review of HIV-positive patients in order to obtain information necessary for a quantitative analysis of correlates of treatment failure. Data collected included ethnic affiliation, alcohol use, and clinic travel time. The results of my mixed methods analysis emphasize the need for additional research on the intersection of culture and health in Kenya. Opportunities for interventions include partnerships with providers of alternative medicine, small group interventions addressing stigma and health concerns of men, and addressing reported high rates of alcohol consumption.

#### **Motivation:**

The HIV epidemic in Kenya has claimed more than 1.7 million lives, orphaned more than 1.1 million children, and it continues to spread, with more than 100,000 new infections in 2011. Not only does HIV cause substantial morbidity and mortality in infected individuals, but it also causes deleterious effects on families, communities, and countries. Antiretroviral therapy (ART) can delay progression to AIDS and allow infected individuals to live healthy and productive lives. Culturally appropriate treatment is an essential component of quality care, yet there is little research on the way that culture affects HIV outcomes in Kenya. Utilizing qualitative and quantitative research to understand Kenyan culture, I aimed to improve treatment and care of HIV-positive individuals living in Kenya by identifying cultural institutions that may affect health.

#### **Objectives and Specific Aims:**

The objective of this research project was to investigate whether there are cultural institutions that may affect HIV transmission, adherence to HIV clinic appointments and HIV medications, and treatment failure.

#### **Specific Aims:**

- 1) Conduct a comprehensive literature review to identify cultural institutions in Kenya that may affect HIV transmission, adherence to clinic appointments, adherence to antiretroviral therapy, and treatment failure
- 2) Discuss findings from the literature review and identify additional cultural institutions affecting health through semi-structured formative qualitative interviews with Kenyan clinicians and social scientists
- 3) Quantitatively evaluate whether certain cultures or cultural institutions are associated with treatment failure in a cohort of HIV-positive patients
- 4) Identify areas for further research and intervention development

#### **Findings and Future Work:**

Through the literature review and qualitative interviews, I identified many cultural factors that may contribute to HIV transmission and clinical outcome. Certain factors, such as acceptability of male circumcision, polygamy, wife inheritance, widow cleansing, and disco funerals vary between ethnic communities in Kenya. This highlights the importance of considering culture when designing interventions, conducting research, and assessing HIV risk. Other factors, such as poverty and alcohol use, were more pervasive. Stigma was identified as a factor significantly contributing to HIV transmission and poor clinical outcomes in all communities.

Culturally relevant messages may improve acceptability of HIV education. Through the interview process, I noticed that the burden of HIV stigma might prevent individuals, especially men, from seeking and adhering to care. Although there are many novel small group interventions focused on women occurring throughout sub-Saharan Africa, men may also benefit substantially from small group interventions. Alcohol use was also noted many times during interviews as a risk factor for transmission and poor adherence. Behavioral interventions addressing alcohol consumption may help to reduce HIV transmission and improve clinical outcomes of patients.

In order to explore the factors identified through literature review and the interviews, additional qualitative and quantitative research should be conducted. It will be especially important to speak with community members, preferably influential leaders from different ethnic communities. A study specifically examining the effects of culture on HIV transmission and treatment outcome is necessary to generate actionable data.

This project was a starting point that identified possible clinically relevant factors and demonstrated feasibility of a study examining culture and health in Kenya. In the future, ethnic affiliation should be considered in all research projects, because it plays an important role in shaping behavior.

#### **Acknowledgements:**

I would like to thank the generous support of the Laura W. Bush Traveling Fellowship for making my trip and research possible. I would also like to thank all my Kenyan collaborators, my research advisor, and the Brown International Scholars Program.



Working on the farm



Women making jewelry at the craft workshop



Jumping with a Masai man

## **Unconventional Means: A Reflection on my Time in Sri Lanka**



The plans were set. We were crashing convocation. So I exaggerate – but not really. We had spent all of Friday registering women and farmers to GrowLanka, a mobile system I co-founded back in 2012 that sends sector-specific job alerts to subscribers. Midday I broke away for a meeting with MAS, an employer in the northern part of the country whom we were collaborating with, and ended up talking to a young woman working there. She suggested we try talking to young people about our system. "They could really use it," she told me. "And you know what – tomorrow is my convocation at Jaffna University — there will be like 1000 people there that you could tell about GrowLanka." And the lightbulb went on. She called her dean at the school and arranged for us to have a table set up outside of the University. We made a big GrowLanka banner and printed up instructions for subscribing people to the system. I made a gazillion more subscription cards and started cutting them out. We sent out a facebook alert. Everything happened so quickly, it was bizarre. But there we were on Saturday morning at 6:30 am leaving Vavuniya to make the 3 hour drive along the A9 highway to Jaffna.



We set up shop right near one of the gate entrances. The grounds were filled with people. Garlands, lights, colors. Ladies in pretty saris and gents dressed up in suits. It was clearly a day for celebration. I felt like one of the wedding crashers. But it was a venue that made so much sense for GrowLanka. Here these young people were graduating from college or from their degree program and inevitably, they would be looking for a job.

As soon as we got there, people rushed to help us set up. Young men helped us hang up our banners and our driver and translator for the day started telling people about GrowLanka. We got about ten people signed up in one go. But then what

was really astonishing to me was how they stuck around. The student body president of the junior class was with us. They called their friends over, explained the system to them, and helped us get more people subscribed.





As more and more people gathered around our table, more stopped to hear about our work. At times I felt like I was at the floor of some massive arena with a bunch of people peering down at me. The students peppered us with many questions — about the nature of our project, about our service, about why we were doing it, the jobs they might see come across the system. It was busy work. There were ebbs and flows of people for certain but more often than not our hands and eyes and mouths were occupied with completely different tasks all at once.

Amidst the chaos, there were a few things that really made me pause. For one, the men were always eager to sign up. They questioned us less. The women hung back in groups. Once the crowd died down, I'd see groups of women flung out a couple feet from our table. They'd send over an emissary to our table—the woman who, I suspect, spoke the best English from among them. She'd ask us many thoughtful questions and take her measure of us. And then she'd take a whole handful of subscription cards and get the women in her group to sign up from an area removed from our table. Eventually, she'd come back, gifting us with a whole load of papers. Many women (and I didn't even realize this until I started data entering all these new subscribers) entered several numbers—not just for themselves but too for their kids, husbands, family members. Women, I found, were far more timid to approach us — just as they were far more discerning of our services. They proved to be some of the best advocates for our system.

But beyond anything else, the thing that sticks out to me most was the exchanges I had with the people on the ground there. A second year Tamil law student came to the table with his Sinhalese friend. They were talking in Sinhalese so I interjected. He said you know I'm so glad you're doing this – you don't even know how much this is needed. The people here really suffered



during the war. He explained to me the trials of finding a job, features not all that uncommon in postconflict environments. He explained to me that a lot of people had taken 2-3 times longer to complete their degree because of the fighting going on. Some students couldn't go home because during term time their home villages turned into battlefields. The library on campus was burned one night. Students couldn't do internships over summers because businesses had left the region – meaning that when they graduated, they didn't have any experience to market to potential employers. All these things and more he ticked through methodically and then he turned over his subscriber card and wrote a note about the specific kind of job he was looking for — beyond just the routine category (medicine, law, government

work, etc.) that our system required users to input. I could see then how he really believed in our system. That got to me. How ten minutes later he came back with his friends and explained our set-up to them. How he shook my hand. The promise in his eyes, his belief in our system pushed me even harder; it is this moment that is now sealed in my memory, one that I think about each time as we make plans to scale and grow GrowLanka to better service beyond the north.

There are a lot of people who don't know what to think about post-conflict Sri Lanka. Westerners and journalists alike worry that peace is only temporary; that the violent ethnic tensions that caused turmoil for so long will fester and take root once more. But when I think back to the day I spent at Jaffna University, I can't help but think about the people I met—the students who were just like me—who want so badly for everything to work out, who loved Sri Lanka not as Sinhalese or as Tamils but as Sri Lankans. There are many people who would like to bet against Sri Lanka right now but my work on GrowLanka this past winter taught me that I'm not one of them.

#### Summary of Trip: Progress made on GrowLanka

- Subscribed 400+ new individuals
- Established new partnership with the Sri Lankan Ministry of Youth Affairs and Skills Development: On the ground, we quickly discovered that it was not just individuals in the north—particularly farmers and war widows—who found our system useful but too young people. Youth unemployment is currently a problem of much concern in Sri Lanka. During my trip, I pitched GrowLanka to the Director of Information Technology at the Ministry of Youth Affairs and Skills Development offering to donate the technology that GrowLanka uses to the Ministry. After a meeting with the Director General of the Ministry at the end of my stay in Colombo, I signed a memoranda of understanding with their office and am currently working with a team of government developers and the developers who created our GrowLanka system to make certain modifications to our system such that it fits the server specifications for the government. Thereafter, we plan to transition control of our system to the Youth Ministry, allowing for long term sustainability of GrowLanka's service at an affordable price to be covered by the Sri Lankan government.
- Consulted with our developers to add more rigorous analytics to our administrative dashboards
- Ran subscriber workshops in Northern Sri Lanka and trained local Youth Affairs officials in the northern Vavuniya province to run such workshops with potential new subscribers in the coming months

**Expenses:** 

Expenses.	
Description	Cost
Flight (Roundtrip: Washington DC →	\$1859
Colombo)	
Accommodations in Vavuniya	\$20 x 10 = \$200
Accommodations in Jaffna	\$30 x 3 = \$90
Accommodations in Killinochchi	\$20 x 4= 80
Internal Transportation (between Vavuniya,	\$140
Jaffna, and Killinochchi + within Colombo)	
Translation Services	\$20
GrowLanka Banner	\$50
School Supplies – to make subscription cards,	\$5
advertising posters, etc.	
Jaffna University Table Rental	\$24
Roundtrip Train from Colombo to Vavuniya	\$34
Accommodations in Colombo	Covered (Family)
Workshops/Field Costs	\$35
<b>Total</b>	\$2537

Grace French, August 2014 University of Michigan

Connecting with Rwandan street children through dance:
A base for education

#### Summary of Project

I traveled in summer 2014 to Rwanda to work with 46 street children in the country's capital, Kigali, through the Rebecca Davis Dance Company (RDDC). RDDC, based in New York City, works primarily in the post--genocide and developing countries of Rwanda, Guinea and Bosnia-Herzegovina. Staff members integrate dance into the Educational process by using it to teach 11 core qualities the organization has identified as essential for cognitive development. In Rwanda, the company provides dance classes for the children along with information technology classes and a sanitation program.



#### Introduction

"Why do you like to dance?" I ask, looking into the eyes of a young African boy. His clothes are in desperate need of washing and his shoes are so torn they barely hold onto his feet. In spite of his obvious needs, he shows up to dance class loyally every other day at noon. As the translator,

one of the other teachers, repeats the question in the local language of Kinyarwanda, the boy's eyes light up and his smile, which had been absent seconds before, seems to radiate the joy that I see explode out of him when he dances. "Because it is what I love," he responds simply.

For a group of boys whose home is the streets of Kigali, a dance program offers them a way out. It's a few hours a week that they can focus on something other than their daily struggles



and an opportunity to earn their way, possibly, into an education program that could brighten their future and provide them with an avenue to earn a living.

Just twenty years after the genocide here, the country is recovering, but many of these children Still face massive challenges. The children who participate face severe poverty, lack of access To a good education, and often have had an unstable family life. Their parents, many of whom are the survivors of the genocide, may have been abusive, unwilling or unable to care for the children. Some kids as young as seven find themselves homeless. Rwanda does not have an official number for how many are homeless, but an estimated 7,000 children are thought to live on the streets of just Kigali, and the numbers are probably higher than that in reality ("Worst Forms of Child Labor", 2005).

To reach these youngsters, the Rebecca Davis Dance Company first introduces them to a Formalized dance program. Dance helps to lift the child's self---esteem in the face of poverty And teach discipline when a parent figure is not present. Dance attracts the children to the program and helps retain their attention so that more skills can be taught as well as eventually some academic and training components. RDDC aims to improve young lives through helping these youth develop IT skills once they have mastered self---discipline, developed the ability to memorize, and demonstrated responsibility.

#### Rwanda

Rwanda is located in the southeast of the African continent, south of the Sahara Desert. Bordering nations include Uganda, Tanzania, Burundi and the Democratic Republic of the Congo (DRC). Recent fighting in the DRC sometimes spills over the border into Rwanda, but the nation today is generally peaceful internally.

The country's total population is about 11.4 million, and about 2 million people live in the capital, Kigali ("Rwanda Statistics", 2013). The country's official language is Kinyarwanda, and few people speak English. It is unusual to see Caucasians in the city.

There is not a bad view in Kigali. Driving through the city, one is either on the top of a hill looking down into a valley filled with colorful roofs and the hustle and bustle of a city or in the valley looking up on homes built into the sides of the mountains. Most of the country is mountainous. Rwanda is beautiful, and the nation is known as the land of a thousand hills.



Rwanda is most well known in the West for the genocide that occurred there. It is hard to believe that just two decades ago, 800 thousand citizens were killed in just 100 days in the Tutsi genocide of 1994. Many consider this division, as well as the oppression that followed, a result of colonial powers present in Rwanda. The colonial powers raised the status of the Tutsi during their rule, and after independence, this created a sense of inequality. Extremist Hutu felt they should not share land or power with Tutsi.

I visited Kigali Memorial Museum, which is dedicated to educating visitors about the genocide of 1994 as well as promoting tolerance. The Memorial consisted of a museum portion filled with Information about that dark time of Rwandan history and what was called "the gardens." In the garden, amongst the beautiful flowers and fountains, slabs of concrete marked mass graves that are now the burial sites of more than 259,000 people. It was an eye--opening experience that inspired tears and hope for the transformation of this beautiful country.

I visited two other memorial sites, one in Nyamata and the other in Ntrama. Both sites were very different from the fact--oriented memorial in Kigali.

I stood in a mass grave. I stood next to the remains of 45,000 people. Skulls stared at me from Shelves and stacked coffins loomed over me. And that was just one of the graves at one of the memorials. Nothing could have made the genocide seem more real than standing there in the dim light with those people who had lost their lives.

My mind couldn't comprehend the atrocities that happened in these churches. Men, women and children were slaughtered in a place of worship. The clothes of victims covered the pews and hallways of the church. Their personal belongings were strewn across the altar, including identification cards and rosaries. Weapons of the killing Interahamwe were also on display, including machetes, clubs and knifes. On the wall was a cross. I thought it was part of the church until the guide pointed at it and said, "This cross was used to bludgeon those who survived the grenades."

The guides at both memorials pointed to holes in the stone floor from the grenades and bullet holes in the ceiling and walls. A bullet had chipped the left shoulder of the statue of the Virgin Mary at the Nyamata memorial.

In Ntrama we entered the Sunday school where the guide pointed to a reddish stain on the wall and told us, "This is the blood of the children who sought refuge in here and were killed by being smashed against this wall."

Words cannot begin to describe my feelings about these visits or the way that these People were killed. Never forget. Always remember. Never again.

#### The Rebecca Davis Dance Company

RDDC is a 501(c)3 organization founded in 2005. Based in New York, it works in Rwanda, Guinea and Bosnia---Herzegovina. RDDC's mission is to build sustainable projects in post---conflict countries using dance training, performance and education as tools for reconciliation, community building and economic development. The company's focus is on using dance as a tool to help underserved children.

RDDC began as a dance company using full---length contemporary ballets to bring literary works, significant historical events and modern social issues to the stage. At the same time, Rebecca Davis and company members were teaching and choreographing in short---term projects overseas to help children in post---conflict countries.

RDDC then decided to make its international projects its primary focus, targeting its work in three countries: Rwanda (Great Lakes Region of Africa), Bosnia-Herzegovina (the Balkans) and Guinea (Mano River Region of West Africa). The company focuses on these areas because of these countries' ethnic divisions, which stifle economic growth; the need for innovative, sustainable programs that target youth is also prevalent. RDDC contacts and project partners in each country, and develops a program in each region that will most effectively help the children in need and the community as a whole.

In **Bosnia---Herzegovina**, RDDC focuses on integrating youth of diverse ethnic backgrounds. The first project, Nas Svijet ("Our World"), began in 2009 in Brcko in the summers between 2009 and 2011, RDDC instructors ran a series of dance workshops for Croat, Serb and Bosniak youth in coordination with local partner organization, Svitac. The workshops involved discussion about a social issue — such as HIV, conflict prevention, or human rights. Top students received additional training in order to continue the workshops after the RDDC instructors departed. Since 2011, in the city of Mostar, RDDC has brought together several local organizations to provide a dance program for underserved children and hired a local coordinator to oversee the project. Children focus on social inclusion and reconciliation through dance.

In **Guinea**, RDDC works with a local partner to foster positive relationships between Peuhl, Susu, and Malinke children and to educate street children. Dance workshops are followed by English language training and a stipend---based work---study program.

In **Rwanda**, RDDC first partnered with the National Youth Council, Red Cross Rwanda, and Amizero Dance Kompagnie on a water project. In the water project, RDDC worked with 60

to 100 children in a village near the border of the Democratic Republic of the Congo. The children participated in daily dance workshops and social dialogue sessions, discussed safe water practices, water conservation, and basic health. At the conclusion of the program, the children performed a dance--theater choreographic work that portrayed good and poor water practices before an adult audience. The children educated the community.

In all programs, staff use dance and choreography to:

- · Target and assemble as many as 100 children (ages 10 to 19 years) of diverse ethnic backgrounds;
- · Combine dance technique lessons with thematic discussions on one of the following topics: reconciliation, water conservation, or health and sanitation;
- · Offer a youth leadership/entrepreneurship component that trains the top students enrolled in the program to become teachers' assistants, lead instructors, and eventually in---country program administrators.

The organization measures success by its economic impact on participating youth and the local partner organization(s); number of graduates; and community awareness about the issues addressed.

#### **Training**

To participate effectively, I spent a week in Atlanta, Georgia, training with other potential teachers and volunteers.

My years of dance, including a summer of training with the American Ballet Theater in New York and a year with University of Michigan's dance department as a major, did not prepare me for this training. The training I had previously received focused on the technical aspect of dance. With RDDC, I was probed to think about dance more as a tool to accomplish something other than beautiful ballet technique.

I learned the RDDC curriculum that is being used in the centers the company has established. The curriculum centers on 11 core elements the students need to learn. The company has identified these skills as essential to cognitive development. Instructors help to cultivate these skills by engaging the children through dance:

- 1) Memorization
- 2) Commitment
- 3) Teamwork/collaboration
- 4) Respect and tolerance
- 5) Retention and recall of information
- 6) Physical strength
- 7) Self--esteem
- 8) Creativity and self--expression
- 9) Language
- 10) Coordination
- 11) Concentration

In addition, the training offered information about the nation's culture and expectations, as well as logistics for time spent in---country: what and where to eat, how to dress, basic language/vocabulary, local customs and currency, and so on.

#### RDDC in Kigali

RDDC began working in Rwanda in 2008. In 2011, it replaced its work with the youth talent

development initiative with a partnership with FidesCo, a local organization that houses street kids for a period of time before reintegrating them into their homes. RDDC employs four local Rwandan staff members to work with approximately 40 to 50 streetchildren five days a week.

At FidesCo the boys are already housed and cared for by the FidesCo staff and funding. At this center, RDDC staff teach dance class and information technology (IT) class. The boys take dance class for two and a half hours at a time, three days a week. On the alternate days, they have IT and computer science classes.



The IT program is important because it helps the young people acquire skills that can lead to a sustainable livelihood. RDDC chose IT because it is one of the fastest growing industries in the Rwandan economy. Many companies are seeking Rwandans with skills in computers. Few Rwandans have this skill. If the boys can learn to use a computer, they have a greater chance of getting a job with these companies and to make a living. IT students also practice their skills by communicating on their own blog site at <a href="http://blog.rwandayouth.com">http://blog.rwandayouth.com</a>.

The kids are also interested in computers and technology. IT is exciting for them to learn, and they retain the information more readily if they are excited about the subject. To obtain a professional job, kids have to start their formal education at a young age. That is not the reality or even an option for many of these street children, and so working with computers provides a more likely career path. IT also requires problem solving and resourcefulness, strengths of a lot of street kids.

In 2014, RDDC received recognition as an international non--governmental organization in Rwanda and so was able to open its own center, giving staff a chance to work with the boys for longer than the four--to six--month cycle of the FidesCo program. At the RDDC center, the boys take dance class and have other opportunities. RDDC is building an IT classroom alongside the community dance center. The goal of the dance program is to develop the children's basic cognitive skills in a structured learning environment. Then they can develop computer skills and hopefully transition to a formal education or a job.

On my last day in Rwanda, RDDC also began a clothing program with donated clothing from the dance community in New York. Students who attend all 12 dance classes in a month receive a new outfit.

These clothes can be the second or third clothing items the child has *ever* owned. One 16---year---old boy had owned only one outfit in his life, clothing he found in a neighbor's trash.

Staff members were excited to present these items. As they called each name, the child receiving the clothes broke into a huge grin. His friends cheered and clapped him on the back. Then we called out another



name, Ally. The room was silent as all the boys looked at their feet. Ally was absent, the first time he had missed class in three months. I feared for this 13---year---old sweetheart. After some frantic translations, we found out Ally indeed had been arrested simply because he did not have a home. The quiet, hardworking little boy could not come to class anymore.

Evode and Jean Baptist are two other boys in the RDDC program. The two left their families for

the streets because of the extreme poverty they experienced in their homes. They thought it would be better for their families to not have to provide for one more mouth and thought they would be able to help themselves more on their own. Both students are very hard working in class, but before and after their class experience, they sleep and get up as the sun is setting to sell cigarettes on the street to make enough money for food and water. The two worked hard to save some of their nightly earnings and pooled their savings for a small, dingy apartment in Kigali's ghetto where they sleep in between class and work. They are proud that they were able to



afford it, but they have to continue a vigorous work schedule to afford the next month's rent. After paying for the apartment, they barely have enough money for food. Even so, their story shows how the boys in the RDDC program work hard to get what they want and where they want to be.

The kids at the RDDC center know that class starts at noon, but most days they arrive beginning at around 10 in the morning. A new sanitation program has become a big part of the boys' lives. The boys who attend class at the RDDC center come before class to shower every other day and wash their clothes once a week. They also have the opportunity to brush their teeth and hair.

Although plastic bags are illegal in Rwanda, the boys have wrapped them into a ball and tied them with string to make a ball to play soccer.

At about 11 a.m., many gather on a concrete slab outside of the dance studio and begin to practice the choreography they learned in class. Closer to class time, they put on their RDDC

uniforms, enter the studio and stretch, as well as do strength work like pushups and abdominal exercises. By this time, many of them are in a full on sweat.



I can say from experience that these kids work ten times harder before class begins than any of the children I have taught or danced with in the United States. These boys, quite literally, have nothing. Yet, they always come to dance class, excited, ready to learn and undaunted by the incredible hardships of their daily lives.

#### Working in Kigali

With RDDC Rwanda, I helped teach dance classes. The dance class has three parts: warm up, across the floor, and choreography. The standardized warm up is presented to the teachers in three sections in chart form. The first presents the movement, the second is the anatomical or kinesthetic objective, and the third is how that movement correlates with one or more of the 11 defined cognitive skills.

Once the teachers feel that the child has reached a competent level in these 11 areas, RDDC begins the search for a sponsor to help send the child to a boarding school for a safe living place and a quality education in their home country.

I assisted the teachers, demonstrating and correcting the kids' positions to help them understand, through either very simple Kinyarwanda or a translator, how they should use their arms in pique turns, for example. I worked both at the RDDC center and the FidesCo center, traveling by bus each day about 45 minutes each way.

I visited RDDC's partner organization, FidesCo, where I observed RDDC's information technology program. When we arrived we walked into a colorful classroom full of picture books in English and bright posters. Crafts presumably made by the street kids living at FidesCo hung on the walls and waved a greeting as the breeze blew through the safety bars ff the open windows. Pictures on the walls illustrated FidesCo's programs: a parent program; sports programs for the children; sanitation education; meals and living space; and RDDC's dance and IT. The team ushered the two American teachers through that classroom and out into the open air again.

The building made an L-shape and boys played checkers and kicked a water bottle back and forth along the sidewalk that led from room to room. Expanding out from all sides was land

owned by FidesCo. A field as well as a densely wooded area, sand, and a couple steep hills left the children with much to explore in their free time. As we exited the first classroom, a football (soccer) game seemed to be in progress down in the valley.

As we reached another classroom, almost as colorful as the first, many of the FidesCo boys I recognized had already come up to say "amakuru" to us and to grasp our hands in the Traditional Rwandan greeting.

Some of the kids followed us into the classroom and settled down onto the benches along the back. The first class of IT was the more advanced class of the two. The children first discussed only theory. The teachers asked, "How does the Internet work?" and similar questions. Some children then were sent to use the laptops. They immediately got onto the computer and opened up Microsoft Paint. They drew a picture then logged onto their email, attached it and sent it off with a couple of words. I later found out they were sending Caitlyn, another American teacher working with the company, and me "Happy Birthday" emails because our birthdays were just a couple days away.

The kids still waiting for a chance at the computer, though, sat close to me, watching as I took some quick pictures of those working on the computers. Soon after they started making funny faces at me and saying, "Photo." After a while I got the hint. I again took out my iPhone and began to snap pictures of the kids, who had now turned into goofballs. They reached for my phone and I handed it over. They immediately took off across the room snapping pictures of each other, the computers, anything and everything in the classroom. The members of my team who were teaching began to shoot me looks as their classroom started to cross the line into chaos. I immediately evacuated my seat in the back and followed the boys, trying to think of a good way to get them back sitting down and somewhat quiet. I grabbed my phone from one of the boys and using it like bait, moved them all back to their original seats. Once I had them sitting after repeating several times "Hasi! Hasi! (Down! Down!)" and motioning to the bench, I handed them back my phone, this time with the front camera on.

The boy I handed it to at first took it and started to spin around looking for something to take

a picture of, then realized that instead of the classroom he was seeing his own face on the screen. His eyes widened. A grin broke out on his face and the kids leaning over and into the camera were immediately fascinated by the same thing that most of North America seems to be fascinated by--the selfie. Giggles, laughs and huge guffaws were the only noises coming from the group now as they took turns making funny faces at the camera and snapping photos of themselves. I may forever be remembered as the girl who taught these third--world children how to take a selfie.



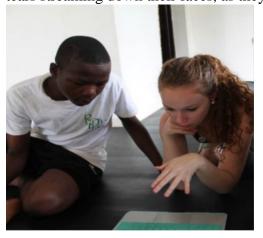
As part of my work at the center, I also spoke to the children to create profiles of them. I got to know each child through interactions, interviews, and pictures. I made a file for each with basic information including name, age, schooling (if any), family, history and more. The RDDC administrative files of the children are particularly helpful in cases when the kids are arrested like in the case of Ally.

The government of Kigali has a policy of arresting children who are living on the street and taking them to what is roughly translated as "the transit center." Hundreds of street kids are taken here, so one can imagine the living conditions. Many boys emerge from the transit center with infections or injuries from fights.

Family members can claim a child from the transit center, but many of the street children have lost contact with their family or the parents may not choose to take responsibility for them. RDDC is creating files on each boy to help locate family members to get the child out of the center or know whether it is possible to reintegrate the child back into his home. For some who come from an abusive background, this would not be a good option.

A few boys are released from the transit center by having another adult come in to claim that the boy is a family member and claim him. If no family member claims the child, he is sent to FidesCo where he can live for three or four months, sometimes longer, and from there be reintegrated into his home and sometimes an abusive situation. Many end up back on the streets, creating a vicious cycle that makes these children's lives more disconnected and challenging. What ties they may have are interrupted. This was where Ally, the boy who was supposed to receive a new outfit, was sent.

In addition to creating files, I helped to write short stories about the boys' lives. It was heartbreaking work. Many of the kids who smiled and were so happy in class broke down, tears streaming down their faces, as they recounted their life situations and histories. As I



learned a bit about each youth in these interviews, I had to try to portray each in just two paragraphs, an impossible task. The information was then uploaded to the RDDC's website, <a href="www.rwandayouth.com">www.rwandayouth.com</a>. (The site had not yet been updated at this writing because the companyis transitioning to a new website when it changes its name to MindLeaps. The new website, mindleaps.org, will integrate the rwandayouth.com website and company information into one cohesive site.) RDDC uses its website to connect children with sponsors who can help fund some of their education. The brief stories hopefully will help encourage a sponsor to fall in love with the children as I have.

## Implications for the future

RDDC's goal is to build field offices in each of its three focus countries and hire local staff in order to invest directly in the local community and to find partners to help bring a dance---based

model of reconciliation and community education to scale. As a relatively new company in the field of international development, RDDC hopes to continue to grow its outreach and help more children. While I was in Rwanda, ballet barres were installed in the center and the company began the clothing program. The IT program will be operating in the RDDC center by the end of September, adding to the classes now offered in the FidesCo site.

The team identified crucial elements that need to be addressed in providing for the basic needs of the kids in the center, and RDDC is searching for funding for its programs, Including an agriculture program to provide healthy lunches on site and a water program to help increase the hydration and water sanitation of the children. Most recently, RDDC began purchasing medical insurance for all the center's children to assist them with health concerns.

Using the arts is an excellent way to empower children and a good way to chip away the distress children in poverty experience. Through the arts, children can learn many skills: cooperation, timeliness, attention to detail, self---discipline, and especially persistence. These skills are the foundation of success in other areas, such as formal education. By enticing impoverished youth through the arts, we can help them nourish their souls with creativity and keep them developing skills that can lead them through further studies in more traditional academic subjects or trade learning.

In Rwanda, the country's steady growth in business and the economy shows the strength of its spirit and community. To continue to develop, the country will need to educate all of its people and to raise them out of the poverty in which so many live. In the end, although I went to Rwanda to help those there, I grew and learned more than anyone I helped. The resilience and strong--minded hope of these young boys was inspiring. Rwandans' constant hope for the future was motivating.

As I return to the United States, I hope that my involvement with RDDC will continue. I learned about myself and what kind of work I want to do in my future. I will study dance and business, and my aim is to continue working internationally to help those in developing nations.

I think of Eugene Dushime, the country director for the Rwandan center, who said, "I have seen kids changing just by words of affirmation. I see them doing what they thought they couldn't do. Their self--esteem improves, not because they have all they need, but because they know someone told them that they can do better and their future is shining so bright."

#### Citations

"Rwanda Statistics." UNICEF. UNICEF, 27 Dec. 2013. Web. 21 Oct. 2014.

"Worst Forms of Child Labor." U.S. Department of Labor. N.p., 2005. Web. 20 Dec.

2010.

Dushime, Eugene. "Transforming the Negative into Positive | Rebecca Davis Dance

Company." RDDC, MindLeaps. Rebecca Davis Dance Company, 5 June 2014.

Web. 26 Oct. 2014.

#### Stories of the street children

### Ally Sibomana

I am 13 years old and from Kigali. I have studied through 1<sup>st</sup> grade of primary school here in the city, but didn't have the chance to study past that. Currently my

home is the streets of the city and it has been for two years. When I lived at home, my father was never there. I figured that moving to my Grandma's with my four siblings would be good since there was no one home to take care of us. But Grandma didn't like me, so I moved to the streets. My siblings still live with my Grandma and sometimes I get to see them. In my free time I love to watch movies especially Expendibles 2 which is my favorite movie. My best friend is Eesa who also lives on the streets with me, but he doesn't come to dance. The reason that I



dance is because I feel like it will help to support me in the future. I want to be a dancer and hopefully someday I can be like my teachers and teach other street children.

Ally is a quiet kid, but that is because he is always paying attention. His good work ethic really shows in class and in attendance. Ally works hard to achieve his goals and is a very good student. Ally is the first one to know what is happening next in class.

#### Jean Baptist Tuyishime



I'm 14 years old and have attended 1<sup>st</sup> through 5<sup>th</sup> grade. I currently have my own apartment with one of the other dancers, Evode. The apartment was very expensive for us since we came from nothing. We had to save up a lot of money earned from selling cigarettes on the street at night. Even then we could only afford a very poor apartment in the ghetto of Kigali. I still consider myself living on the streets because we can barely afford rent

and no food. I left my home because there was so much poverty. My mom still lives there with my two younger brothers, but I go to see her about two times a week. In my free time I like to watch movies and play PlayStation when I can afford it at a local arcade. I would love to go back to school and learn about the world. Someday, I hope to be the Minister of Defense in Rwanda.

Jean Baptist can make anyone in the room laugh. He has a good sense of humor and an even better memory. He is very committed to dance and to anything that he sets his mind to. Jean Baptist is really affectionate and protective of the younger students.

#### Pacifique Niyomwungeri

I am 15 years old, but have attended only 1<sup>st</sup> and 2<sup>nd</sup> grade. I could not finish 2<sup>nd</sup> grade because my uniform, backpack, and books were stolen on the street. Now, after 5 years on the streets,

I live at home with my mom, 2 brothers and 1 sister. I originally went to the streets to find money for clothes and other expenses, but the street life is hard. I decided I wanted to care for my 2 younger brothers and my sister instead. When I left the streets, I left all the evil things like drugs and gangs behind and became a better person. Now I am baptized and have a small job selling shoes. At my job if I sell to enough people and make enough profit, I can get paid. I give half of the money to my mom to take care of my little brothers and keep the other half for myself. I heard about RDDC from my friends on the streets. Now it's been 5 months since I started coming to RDDC and the kids here think of me as a leader. I lead through my good behavior and hope that others will fall into line. A lot of the kids have! It makes me happy to see that they

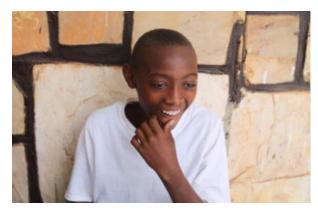


are beginning to follow directions better. When I am Not at RDDC, I go to work. In my free time I like to go over the choreography that we learn in class and then make up my own choreography. I hope to be a professional dancer someday, but also would like to go back to school so that I can learn more.

One can often find Passy in the studio before class has started working by himself or with one of the teachers. He is very respectful of his authorities and behaves himself as well as being a very open and honest kid. Passy was recently designated the most improved student over the past 6 months and is one of the students that the RDDC staff gives their trust to take responsibility of some of the other kids outside of the studio.

#### Karim Niyonkuru

I am 15 years old and was born in Kigali. I have attended school through 3<sup>rd</sup> grade, but in three different primary schools. The first school I attended was just too far from home. I switched to another school closer to my house and started there but it was not a good match. My mom helped me find another school but eventually stopped going there because we didn't have enough money for the uniform and books. Although my mom and little brother still live at home, I have been living on the streets for three years because of all the



poverty. The question "why do you like to dance" is such a hard one. I like to dance because...that's what I love. When I am not at dance I like to watch movies or play soccer. I don't have a favorite movie because all of them are good. In the future I would love to be a pilot. Karim honestly enjoys what he is doing in class. He always comes in with a smile and a laugh to begin the class. He is a natural leader in and out of the studio as well as a talented dancer. He especially loves jumps and turns and is a very creative student.

#### Felix Nkundimana

I'm 15 years old and have had the privilege of going to 1<sup>st</sup> through 3<sup>rd</sup> grade. I currently live



nn the streets of Kigali. My parents separated when I was younger and my mom remarried. I lived with her, her new husband and my three siblings. My mom and step---dad had three other kids. My step---dad would come home drunk a lot and make me do all of the chores and cleaning. At first I did as I was told, but after awhile I realized that no one else was doing anything and so I refused. We had a big fight and after that, he beat me every day. I lived outside of the house like a dog. Then I

thought to myself, "this isn't any better from living on the streets", so I left. I want to dance because maybe if I practice a lot and with a bit of luck, my parents will see me on tv and think "Oh wait, isn't that the boy we used to beat."

I have been with RDDC since 2011. I first worked with the teachers when I Was in RDDC's partner organization FIDESCO. I was then reintegrated into my home. The situation there stayed pretty much the same, so I went back to the streets. RDDC then found me again and I started coming to the center. In my free time I do a lot of sleeping and thinking about life. But I also enjoy scary movies! In the future I want to be a pilot, and would love to go back to school to learn more about flying.

Felix is a very humble kid. He is talented, but does not like to brag. Felix is always up for a good conversation and loves talking to his classmates and teachers. His friendly attitude makes

him approachable. You can tell Felix loves to dance because there is always a big smile on his face as he begins to move. Through the RDDC program he has been reintegrated back into his home. He now works to bring money and food to his family and has shown great responsibility.

#### Jean De Dieu Ndacyayisenga

I am 13 years old and I was born in Kigali. I only attended 1<sup>st</sup> grade in primary school because my mom did not have enough money to send me to school after that. I lived on the streets for three months, but now I live with my 2 younger siblings, 1 older brother, and mom. My step--dad passed away. My oldest brother is in a youth detention center so he can't help us get food or money. During my free time, I go search for food because my mom can't provide enough food or money for all of us. Sometimes I get really hungry and knock on people's doors for food. I have been with RDDC for 5 months now. My other older brother Pacifique told me about RDDC after



he started attending and really enjoyed it. I began to come and found that I really liked it also! I like RDDC because dancing makes me happy and also makes me feel good. I learned how to dance, how to stretch my body, and how to behave well at RDDC. In the future, I would like to be a dancer. I hope to start my own dance company. One day, if I find money, I will help others just like so many people have helped me.

Jean de Dieu is quiet but is always watching and learning from his teachers. Once he begins to warm up to you, he turns into a smiley little boy who loves to play. He takes corrections from the teachers well and can often be seen on the side practicing the movements that have recently been corrected. Jean de Dieu is always on time. He never fights and always works hard.

#### **Renne Byiringiro**

I was born in Kigali and now am 18 years old. I attended public school until 5th grade, but

after the death of my father in 2006, I had to stop because there wasn't any money left to send me to school. I lived in the streets for a year because my family was very poor after my father passed. I am currently living with another boy and have been living with him for 5 years now, but out of his own generosity. He pays all of the rent and I have barely any money to contribute. I am grateful every day for him and his apartment because he saved me from living on the streets. I now think of him as my brother. RDDC is a great program



because I am learning how to stretch and take care of my body. I would like to go to a specialized school of any kind so that I can make money to send home to my mom and five younger siblings as well as help with the rent.

Renne is always smiling and good to others. When he comes to class he is very present. He picks up on corrections very quickly and is a natural dancer. Renne finds freedom through dance and really understands the importance of this program.



#### Jean de Dieu Ntawigira

I don't know exactly when or where I was born, but I am about 12 years old. I have attended 1st and 2nd grade. Currently, I live at home with my mom and younger brother Jean Claude who is also in the RDDC program. When my mom and dad separated, I decided to live with my mom. She couldn't get enough food for my brother and I, so we were sent to our father's house instead. Dad came home very late and drunk almost every night and would beat us. I sent my little brother home to my mom, but I decided to live on the streets hoping that Mom would find enough food to give to Jean Claude. My mother told me to come home and live with

her so I did, but then Jean Claude went to the streets. That is where he learned about RDDC.

He told me about it and we both started to attend. I have been coming for almost a month now and have really enjoyed my time here. Coming here is great because I can get a lot of my energy out. In the future I would like to learn about cars and become a mechanic. My dream is to make enough money to have a house and a car.

Jean de Dieu can always be found standing near the front of the room for class. He is excited by his natural ability to move and is constantly exploring the possibilities of his body.

#### **Evode Umbereyimfura**

I am 17 years old and was born in Kigali. I have attended 1<sup>st</sup> through 3<sup>rd</sup> grade. Currently my home is with another RDDC student, Jean Baptist. We have an apartment together and pay the rent by selling cigarettes every night on the streets of the city. I have lived on the streets for two years and still barely consider myself to be off the streets because the apartment that we could afford with the money we saved is not very good. We only have enough money to pay the rent for the apartment and that is it. My mom lives in Kigali, but my



dad is in prison. I go to see my mom almost every weekend. During the day I sleep so that at night I can be awake and sell cigarettes to pay the rent.

I really enjoy sketching and drawing. In the future I hope to have a formal education so that I can become a doctor! Evode is a very confident young boy who is the big brother figure in the center. He can often be seen resolving conflicts or helping others in sticky situations. He loves to dance and freestyle along the side of the room before it is his turn to do the movements. Even when he is doing his own dance, he is still paying attention to the class and taking in the corrections. Evode has great team spirit and loves the community that is provided through this program.

#### **Emmanuel Mutabazi**

I am 12 years old and was born in the Southern Province of Rwanda. I have never attended



school but hope to receive a formal education in my future. I currently live on the streets of Kigali and have for about a year. After the death of my mom, my dad remarried. My step--mom didn't like me so she kicked me out onto the streets. I have many half--siblings at home with my step--mom and dad. In my free time, I search for charcoal in the streets and try to sell it to make some money.

I also look for people carrying heavy loads and ask if I can help for a tip. Other than that, I enjoy playing marbles. In the future I hope to be someone very important--perhaps in the military!

Emmanuel is a bright---eyed boy who is eager to learn. He is quiet, but always very respectful of others' needs and wants. He is very peaceful and good to everyone. He gets along with all of the students and teachers and never picks fights. Emmanuel wants to learn and understands the importance of the program as is seen through his attendance.

#### **Prince Niyonzima**

I am 14 years old and was born in the Western Province of Rwanda in a city called Kibuye. I completed 1<sup>st</sup> grade, but had to stop my schooling because there wasn't enough money in my family. My parents separated and I came to Kigali with my mom, but then she passed away. I don't know where my dad is, so after mom died I had no---where to go. With nowhere to live, I was forced onto the streets. It has been 3 years since my mama passed and I began to sleep outside. In my



free time, I hang out at the market and help people carry things to their homes for a tip so I can get some food for the day. I also go to some restaurants in town and buy scraps for 100 RWF (about 15 cents) and sell it to other kids on the streets. My best friend Felix, who is also in RDDC, told me about the program and I began to come and join him. It has been such a blessing

to be able to dance every week. In the future I want to continue my education so that I can be a pilot.

Prince is a hard worker. One can tell he leads a tough life on the streets, but he always leaves his emotional backpack at the door. His ability to let go of his outside problems and focus his energy in class is one that is admired by many and has really helped him to excel quickly in the RDDC classes.

#### Eric Nduwayezu

I am 17 years old and was born in Kigali. I couldn't continue past 7<sup>th</sup> grade in secondary school because there was no money left to support my schooling. I currently live at home with my

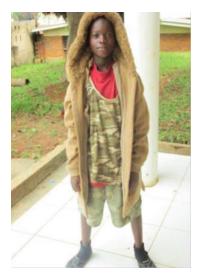


sister and mother. I have 6 other siblings, but we are spread out all over Eastern Africa. My father passed away this year and it has been tough on my whole family. After class I spend my time looking in the windows of schools that train police officers. I try to learn the skills they teach this way because I can't afford the schooling, but I need a job. I hope that I can learn enough so that I can get hired. During my free time, I try to find ways to make money like selling charcoal, carrying things in the market or fetching water. I like to sing hop---hop

and write my own raps as well as freestyle about my life. I want to have a chance to continue my education and study technology. In the future I would love to design new technology, possibly a new car, kind of like an inventor or an engineer!

Eric is a very hard worker. He focuses very well during class and although he doesn't play around he is always smiley and happy. His positive attitude throughout the class is very noticeable.

#### Olivier Manirareba



I am 14 years old and was born in Kigali. I attended school through 4th grade, but stopped because my family couldn't afford to send me anymore. My mom and dad separated and my mom moved to Uganda, but then passed away. I lived with my dad for a bit, but he had no money, so I left to go to the streets and have lived there for 3 years. After my mom passed away, my father sold our house and we both didn't have a place to live. I sometimes go to visit my father who is now living with a friend, but it has been a very long time since I have seen him. In my free time I look for charcoal and old tools that I can resell. I love to stretch and dance even when not in class at RDDC. In the future I hope to have a formal education and to gain more dance experience so I can become a professional

dancer. One day I hope to set up a company like RDDC to help other street kids like myself.

Olivier believes in himself. He works very well with the other kids in class because he respects each and every one of them. His humility shows whenever he gets a correction and practices it by himself along the side. He understands how hard he has to work to get what he wants and is always fighting to be a better person and dancer.

#### Jean Claude Nichimitimana

I am 10 years old and was born in Kigali City. I have never attended school because my family has never had enough money to give me the privilege. I currently live with my mom and brother, Jean de Dieu who is also in RDDC. My parents are separated and for a while, I lived with my mom. She didn't have enough food for me, so she sent me to my dad's. Dad would often come home drunk and beat me, so I left. I tried to go home to my mom, but she had remarried and moved so I did not know where she lived. I spent 3 years on the streets and then my older brother Jean de Dieu found me. He knew where my mom was living so we both



were able to go home to her. We still don't have enough food, but at least we are not being abused and have a roof over our heads. In my free time I like to play soccer. I want to continue my education so that someday I can be a doctor and help people feel better.

Jean Claude is a sweet and quiet little boy. He takes corrections well and applies them quickly. Jean Claude always puts himself in a position to learn well; center during warm up and at the front of the line during the diagonal section of class. This is a great spot for him because he always knows what is going on and can execute the movements accurately. He is an excellent example for the other students in class but also out of class. Jean Claude gives hope and strength to those that he meets.

#### Ishimwe Emmanuel



I am 15 years old and was born in Kigali. I have completed school through 5<sup>th</sup> grade, but after that did not have enough money to go on. I live with my mom and 4 sisters who all have different fathers. I lived on the streets for 4 years because there was so much poverty at home. I eventually returned home because I found that I was just as hungry on the streets. In my free time I go look for food around town and often search for charcoal so that I can sell it for some extra money. I like to play PlayStation when I can afford to pay the arcade to play. In the future I would like to continue my formal education so that I can

someday become a pilot. In my free time I love to make people laugh!

Ishimwe has one of the brightest smiles of the group and he always lights up the room. He is new to dance, but even surrounded by all of the talent, he keeps a very positive outlook during class. When he can't 100% physicalize something that is being practiced, he works very hard to achieve it. He keeps many of the other kids happy and positive during class.

#### **Bolingo Ishmwe**

I am 7 years old and don't know exactly where I was born. I have never attended school because

We can't afford it, but I live at home with my mom and dad. I have 4 siblings, 2 older and 2 younger who I love very much. I have never lived on the streets, but still live in poverty. During my free time I help to fetch water for my mama. When all the chores are finished I like to play soccer. My dad sent me to dance class at first because he didn't want me to be out on the streets where I might get involved in drugs or gangs. Now I really enjoy coming. In the future I hope to have a formal education because I would like to become an engineer!



Bolingo is a sweet and innocent little boy with big eyes. He is free spirited and loves fun and games. He can often be seen before and after class running from teachers to his older friends to get tickled and wrestled. Bolingo is friends with everyone in the studio and everyone loves to be around him. He is eager to know what is coming next and always asks, "Will I become a great dancer?"

## Chelsea Snipes, Summer 2014

## More Than Just Sirens: Using Emergency Response to Deliver Healthcare Education The College of Charleston

#### **Summary**

Palmetto Medical Initiative (PMI) is a sustainable global health non-profit founded in Charleston, South Carolina that exists to transform communities by improving the quality of accessible healthcare through a model of empowerment and sustainability. PMI uses local relationships to choose high-impact sites for medical facilities and then works with the community to build a clinic that fits the needs of the area.



The front entrance of the Masindi-Kitara Medical Centre in Masindi, Uganda.

In early 2014 PMI's Masindi-Kitara Medical Centre in Masindi, Uganda received an ambulance donation from Tullow Oil. As PMI's intern and a certified Emergency Medical Technician I had the unique opportunity to design a project on emergency response in rural Uganda.

The emergency response system in Uganda and other low-to-middle income countries is modeled differently than those in high-income countries. Uganda's population is highly concentrated in its major cities, but is spread out among many rural communities whose economies rely mainly on agriculture. With less than 200 trained surgeons in the entire country, health centers equipped to handle critical patients are mainly found in the capital, Kampala [1]. This epicenter is supported by regional hospitals, but with 0.12 physicians per 1,000 citizens, the country's emergency response system is mainly focused on lengthy transportation from rural communities into a major city [2].

Knowing this and familiarizing myself with the situation on the ground I was able to concentrate on the needs of the clinic, implementing best practices and protocols for the ambulance and using the vehicle as an outreach center at local free-clinic sites.

#### **Reflections & Analysis of Results**

Going into this project I didn't know what resources the ambulance or clinic would have, so I came prepared with Emergency Medical Technician training manuals and a schedule for what I wanted to be sure to cover. Thankfully the ambulance was well stocked and the clinic had elected to have each call run by a non-medical ambulance driver and an emergency medicine nurse. With this new information I had to adjust my original goals to focus on what I could do to aid medical professionals that had never before been a part of an emergency care unit. With my level of education I couldn't offer them much medical training aside from some of the ambulance-specific equipment, so I had to focus my efforts on exploiting the strengths of the

team. We had to work together, and as a surrogate to their knowledge and needs I identified where I could make myself useful:

- 1. Documenting the equipment on the ambulance and deciding what else to be included.
- 2. Making sure there is a way to stock any equipment that is used.
- 3. Putting together a kit that can be removed from the ambulance and taken with the nurse to the patient (before all equipment was secured to the vehicle).
- 4. Training emergency nurses on any equipment they are not familiar with.
- 5. Designing patient care forms that can be integrated to the Masindi-Kitara patient charts.
- Designing patient care forms that can be left with receiving hospitals (other than Masindi-Kitara).
- 7. How to integrate the ambulance with Palmetto Medical Initiative's outreach clinics to educate surrounding areas about local medical resources.

I was able to accomplish these goals throughout the month and got the opportunity on five of those days to go on outreach trips with the ambulance to interact with nearby towns to teach them about surrounding resources. My most important achievement was establishing documentation of any medications or interventions performed during patient transport. With some transport times upwards of four hours (usually to the capital's hospitals, meaning they were reserved for the sickest patients) I realized the importance of documenting everything that happened during that time. With the emergency medical nurses I was able to put together a procedure and forms to be kept on the ambulance that would help both our clinic and any other receiving hospitals know how the patient was progressing and what procedures had been performed.

Putting together a kit that could be removed from the ambulance and used for patient care in the field (known as a "jump kit") allowed initial assessments to be made while at the response site instead of at the beginning of transport. This kit was designed similarly to those I have used in the United States but contained supplies that the clinic stocked and relied on.



Masindi-Kitara Medical Centre's nursing staff training with infant equipment.

Equipment training with the nurses was incorporated into a thorough inventory count on the ambulance. This allowed us to go through everything on the truck, familiarizing ourselves with what was available, asking questions when needed and decided what else should be included for the best patient care.

#### **Future Implications**

The ambulance has continued to use my checklists and patient care forms. Everything has been saved in a place where more forms can be generated at any time. In addition, a precedent has been set for using the ambulance during outreach trips.

During training I also had the opportunity to interact with those working at the clinic and incoming patients. Uganda is a beautiful country with a welcoming culture, so I found myself very comfortable meeting new people and trying new things. Interacting with the attending physician, Dr. Godson, and his numerous patients showed me how different healthcare resources are in low-to-middle income countries. Even with this limitation Dr. Godson and the other clinic staff would do anything for a patient—there were no politics or sleepless nights that would get in their way.

This limitation on resources and spirit of healing can be exemplified by one particular incident. A young mother had come in to the Masindi-Kitara Medical Centre from a government clinic having just delivered pre-mature twins. Six weeks premature is bad enough when a woman is carrying one baby, but with twins it means that they will have to work even harder to survive. Dr. Godson went straight for the mother while the nurses took over the two infants—a girl and a boy. The boy was found dead on arrival, but the little girl was crying, a good sign with newborns as it indicates they have enough oxygen and a certain "will to live." In a more developed healthcare setting the baby would have been put in an incubator (a boxed crib with a heating lamp for warmth), but we did not have access to that technology. After stabilizing the mother, her daughter was placed on the warmest thing in the room—her mother's chest—and wrapped in every blanket we could find. For the next couple of days the two of them were doted and checked on at every possible moment. The emergency nurses and I even used the fire blanket from the ambulance as a heat-trapping blanket.

The baby girl grew stronger and within the week was able to go home for the first time.



Women and their babies in Masindi, Uganda on "vaccine day" at the Masindi-Kitara Medical Centre.

Thankfully my time was filled with many stories like that, of patients surviving against the odds without the many conveniences that are considered a standard of care in high-income countries. Unfortunately many also did not make it—a little boy who fell from a mango tree, a soda truck overturning on a woman and her grandmother. I was able to be a part of triumphs and losses, of children returned to their parents and mothers who never got to meet their babies. I was able to make my small mark on this clinic, emergency medical staff, and community, but they gave me so much more.

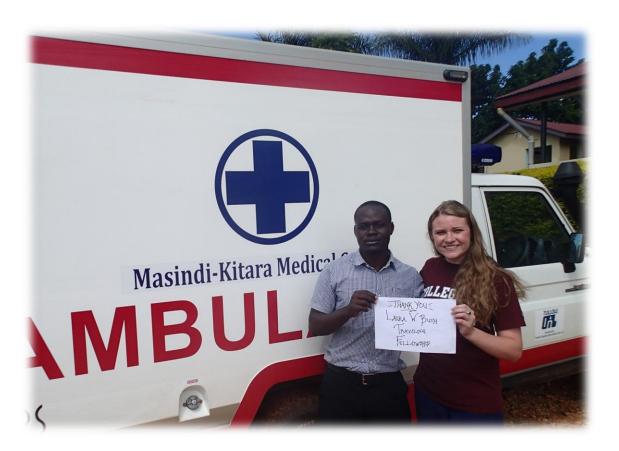
As I continue with my medical training I will remember the compassion, respect, love and determination that those at the clinic showed me every day. I seek to be a physician leader and act as a change agent both within the United States healthcare system and with low-to-middle income countries.



Chelsea Snipes and Dr. Godson in front of the Masindi-Kitara Medical Centre and the ambulance.

#### Appendix

- 1. Linden AF, Sekidde FS, Galukande M, Knowlton LM, Chackungal S, McQueen KA. Challenges of surgery in developing countries: a survey of surgical and anesthesia capacity in Uganda's public hospitals. World J Surg. 2012 May;36(5):1056-65. doi: 10.1007/s00268-012-1482-7. PubMed PMID: 22402968.
- 2. Field Listing :: Physicians density. (n.d.). Retrieved September 10, 2014, from https://www.cia.gov/library/publications/the-world-factbook/fields/2226.html



Chelsea Snipes and Dr. Godson in front of the Masindi-Kitara Medical Centre and the ambulance with a sign that reads "Thank you Laura W. Bush Traveling Fellowship."

# Sustainable Development in Madagascar: Modular Hand-powered Agricultural Tools

Benjamin Howard, Dailee Joyce, Daniel Sales, Katherine Strube, William Wisner

#### **Pre-travel: Dreaming and Designing**

Before leaving for Madagascar, Team Torque set to work on a collaborative brainstorming effort, entertaining any and every idea for imAmanda Hicks <ahicks@artic.edu>proving sustainability in Madagascar. As the ideas circulated, a general theme began to emerge: human powered devices for agricultural efficiency. Inspiration was drawn from a past science fair project, ancient farming techniques, and modern interpretations of age-old technology. After narrowing our focus and refining our idea, the next step was for Team Torque to build a prototype which would demonstrate the simple and elegant concepts used in modular devices across the global and throughout human history...

#### Methods

Working from the blueprint of a former science fair project, we reverse-engineered a modular device with similar features but a new function: winnowing rice. Our device, when cranked by hand, rotates a set of pulleys affixed between two axels by a taut rubber belt. With a 6:1 pulley ratio, one turn of the handle spins the large fan (attached to the opposite end of the axle) six times, reducing the effort needed to generate maximum wind power. Sourcing materials stateside was fairly simple; only a few parts had to be purchased from the hardware store. In Mahabo, the task of finding the necessary components was not nearly as simple, but we managed to get all materials needed thanks to the knowledge and resourcefulness of our Malagasy team-members. One interesting addition which might be incorporated into the device would be a generator constructed from rare-earth magnets and copper wire. A generator would enable the community to store energy in batteries, which could then be used in practical devices like headlamps to extend the hours of visibility required for everyday tasks.

#### **Materials and Cost**

<u>Table/Bench</u>: wood; nails; scrap plastic; paint (found at MBG compound); screws and bolts (bought from the market in Farafangana and Vanga Indrano, north of Mahabo)

Fan: bought a fan in Farafangana at a hardware shop; salvaged from a truck

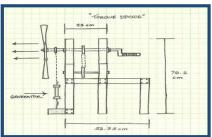
<u>Rice Ramp</u>: crafted from woven mats, broom handles (wittled down using a knife and sand paper), scrap wood, and nails

**TOTAL COST: \$57.41** 











From dream to reality: project exposition day in Mahabo



#### **Conclusions**

We are very proud of what we accomplished in Madagascar and grateful for the lessons we learned during the long construction process. Building a prototype using modern Western conveniences was helpful in that it gave our team a tangible image of what we hoped to accomplish, but our basement-building could never have fully prepared us for our experiences on site. We are so grateful to our Malagasy team members and the community of Mahabo for supporting and contributing to our efforts with their unique insights—we cannot thank them enough for their willingness to listen to our proposal and collaborate with us. Their kindness and trust provided the energy needed to keep our project moving forward. We can't wait until harvest season in Mahabo in order to get feedback on our winnowing device! Next up for Team Torque? Build a mill!

